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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,456	01/27/2004	Steven T. Fink	247394US6 YA	8693

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EXAMINER	
ZIMMERMAN, JOHN J	
ART UNIT	**PAPER NUMBER**
1775	

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,456	FINK, STEVEN T.	
	Examiner	Art Unit	
	John J. Zimmerman	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/24/06 (RCE papers and amendment)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *20-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

OFFICE ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 24, 2006 has been entered.

Amendments

2. The "AMENDMENT" received August 24, 2006 has been entered. Claims 1-24 are pending in this application file. Non-elected claims 20-24 remain withdrawn from consideration.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. It is unclear what does (or does not) meet the limitation "plasma resistant coating" (e.g. claim 1, line 6) when no particular type of plasma or system operating conditions are required by the claims. In view of the wide variety of possible plasma processing systems and different types of plasma compositions, it is unclear what coatings would (or would not) meet the requirement of "plasma resistant".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 and 7-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takebayashi (Japanese publication 2002-110547).

7. Takebayashi discloses a fastener for use in a plasma processing system wherein a plasma resistant coating is applied to the fastener (e.g. see paragraph [0016]) *except* for the threaded portion (e.g. see paragraph [0018] and Figure 1(7c)). Although Takebayashi may differ from the claims in that Takebayashi does not prohibit applying the plasma resistant coating to regions other than the head of the fastener, Takebayashi clearly states that the plasma resistant coating is not applied to the threaded regions of the fastener. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made that any exposed portions of the

fasteners should be coated with plasma resistant coatings as long as the threaded portions are not coated. For conventional fasteners configurations where the entire shaft is threaded, it would have been obvious to one of ordinary skill in the art that the plasma resistant coating would only occur on the enlarged head of the fastener and not on the threaded shaft. The examiner takes Official Notice that fasteners conventionally come in various configurations and that the heads typically have various male or female geometrical shapes (e.g. rectangular shapes, hexagonal shapes, square shapes, etc. . .) to accommodate different types of fastening equipment (screw drivers, hex wrenches, socket wrenches, etc. . .). It would also have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture the fasteners of Takebayashi in any conventional fastener configuration that would typically be used for a plasma treating apparatus because this would enable Takebayashi's fasteners to be used in different types of plasma treating apparatuses. No convincing evidence shows that the claimed configurations are anything more than ones of numerous patentably indistinct configurations a person of ordinary skill in the art would find obvious for this same purpose, *In re Dailey*, 149 USPQ 47 (CCPA 1976). Regarding claim 16, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Regarding claims 18-19, it would have been obvious to one of ordinary skill in the art to coat the plasma resistant coating on the fasteners in uniform and/or nonuniform thicknesses depending on the tolerances required for the fastener and the need for uniform protection or more protection or less protection at particular portions of the fastener. The thickness of the coating necessary to protect the head portion of the

fastener can be readily determined in testing or in actual use. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the protective coating on the fastener for economics as well as to fulfill the protective function of the coating.

8. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takebayashi (Japanese publication 2002-110547) in view of Harada (U.S. Patent 6,783,863) or Harada (WO 01/42526).

9. Takebayashi discloses a fastener for use in a plasma processing system wherein a plasma resistant coating is applied to the fastener (e.g. see paragraph [0016]) *except* for the threaded portion (e.g. see paragraph [0018] and Figure 1(7c)). Although Takebayashi may differ from the claims in that Takebayashi does not prohibit applying the plasma resistant coating to regions other than the head of the fastener, Takebayashi clearly states that the plasma resistant coating is not applied to the threaded regions of the fastener. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made that any exposed portions of the fasteners should be coated with plasma resistant coatings as long as the threaded portions are not coated. For conventional fasteners configurations where the entire shaft is threaded, it would have been obvious to one of ordinary skill in the art that the plasma resistant coating would only occur on the enlarged head of the fastener and not on the threaded shaft. The examiner takes Official Notice that fasteners conventionally come in various configurations and that the heads typically have various male or female geometrical shapes (e.g. rectangular shapes, hexagonal

shapes, square shapes, etc. . .) to accommodate different types of fastening equipment (screw drivers, hex wrenches, socket wrenches, etc. . .). It would also have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture the fasteners of Takebayashi in any conventional fastener configuration that would typically be used for a plasma treating apparatus because this would enable Takebayashi's fasteners to be used in different types of plasma treating apparatuses. No convincing evidence shows that the claimed configurations are anything more than ones of numerous patentably indistinct configurations a person of ordinary skill in the art would find obvious for this same purpose, *In re Dailey*, 149 USPQ 47 (CCPA 1976). Regarding claim 16, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Regarding claims 18-19, it would have been obvious to one of ordinary skill in the art to coat the plasma resistant coating on the fasteners in uniform and/or nonuniform thicknesses depending on the tolerances required for the fastener and the need for uniform protection or more protection or less protection at particular portions of the fastener. The thickness of the coating necessary to protect the head portion of the fastener can be readily determined in testing or in actual use. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the protective coating on the fastener for economics as well as to fulfill the protective function of the coating. Regarding claims 2-6, Takebayashi may not disclose same plasma resistant coating compositions as recited in these claims, but Harada '863 clearly shows alternative compositions in that art that are understood to be particularly suited for protecting the internal parts of plasma

treating apparatuses. Harada's plasma resistant compositions include anodized films (e.g. see column 1, lines 29-40), sprayed coatings of Al_2O_3, Y_2O_3 and mixtures thereof (e.g. se column 2, lines 23-64) as well as various prior uses of rare earth compositions (e.g. see column 2, lines 3-11). Harada '526 is the PCT counterpart of Harada '863 and discloses the same subject matter but has been applied because it has an earlier publication date. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plasma resistant coating compositions of the Harada references for the plasma resistant coating of Takebayashi because Harada's particular plasma resistant coatings have been shown to have excellent plasma resistance.

Response to Arguments

10. Applicant's arguments filed August 24, 2006 have been fully considered but they are moot in view of the new rejections. As noted above, although Takebayashi may differ from the claims in that Takebayashi does not prohibit applying the plasma resistant coating to regions other than the head of the fastener, Takebayashi clearly states that the plasma resistant coating is not applied to the threaded regions of the fastener. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made that any exposed portions of the fasteners should be coated with plasma resistant coatings as long as the threaded portions are not coated. For conventional fasteners configurations where the entire shaft is threaded, it would have been obvious to one of ordinary skill in the art that the plasma resistant coating should only occur on the enlarged head of the fastener and not on the threaded shaft.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and to further establish the level of ordinary skill in the fastener art. Of particular note, Carpenter (U.S. Patent 3,750,623) shows that is recognized in the threaded fastener art that certain portions of the fastener may need thicker protective coatings and that other areas may not need as much protection and the thickness should be varied accordantly. In addition, Carpenter further shows that it is recognized in the threaded fastener art that applying protective coatings to the threads of the fastener can affect the size and tolerance limitations (e.g. see column 8, lines 22-41).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
September 7, 2006